

Application No. 09/894,870

Amendment dated September 2, 2005

Reply to Notice of Non-Responsive Amendment dated August 2, 2005

Amendment to the Abstract:

In accordance with 37 C.F.R. §§1.121(b) and 1.125, and in response to objections to the previously submitted specification, please replace the original abstract with the abstract appearing following this page.

ABSTRACT OF THE DISCLOSURE

A method for applying an algorithm to facilitate the design of wideband omnidirectional antennas, and the design of sleeve cage monopole and sleeve helix units
5 includes rapid resolution of a complex relationship among antenna components to yield an optimal system. A genetic algorithm is used with fitness values for design factors expressed in terms to yield optimum combinations. Cage antennas are optimized via a genetic algorithm for operation over a wide band with low VSWR. Genetic algorithms and an integral equation solver are employed to determine the position and lengths of
10 parasitic wires around a cage antenna in order to minimize VSWR over a band. The cage may be replaced by a normal mode quadrifilar helix for height reduction and with re-optimized parasites.